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MINING LANDS SECTION

Report on Overburden Drilling

Carman Bay Claim Group

Night Hawk Lake Area

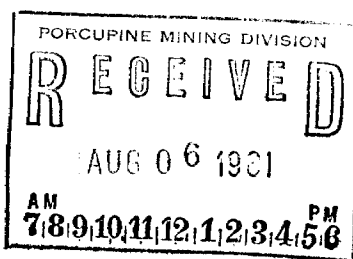
Porcupine Mining Division, Ontario

July 29th, 1981

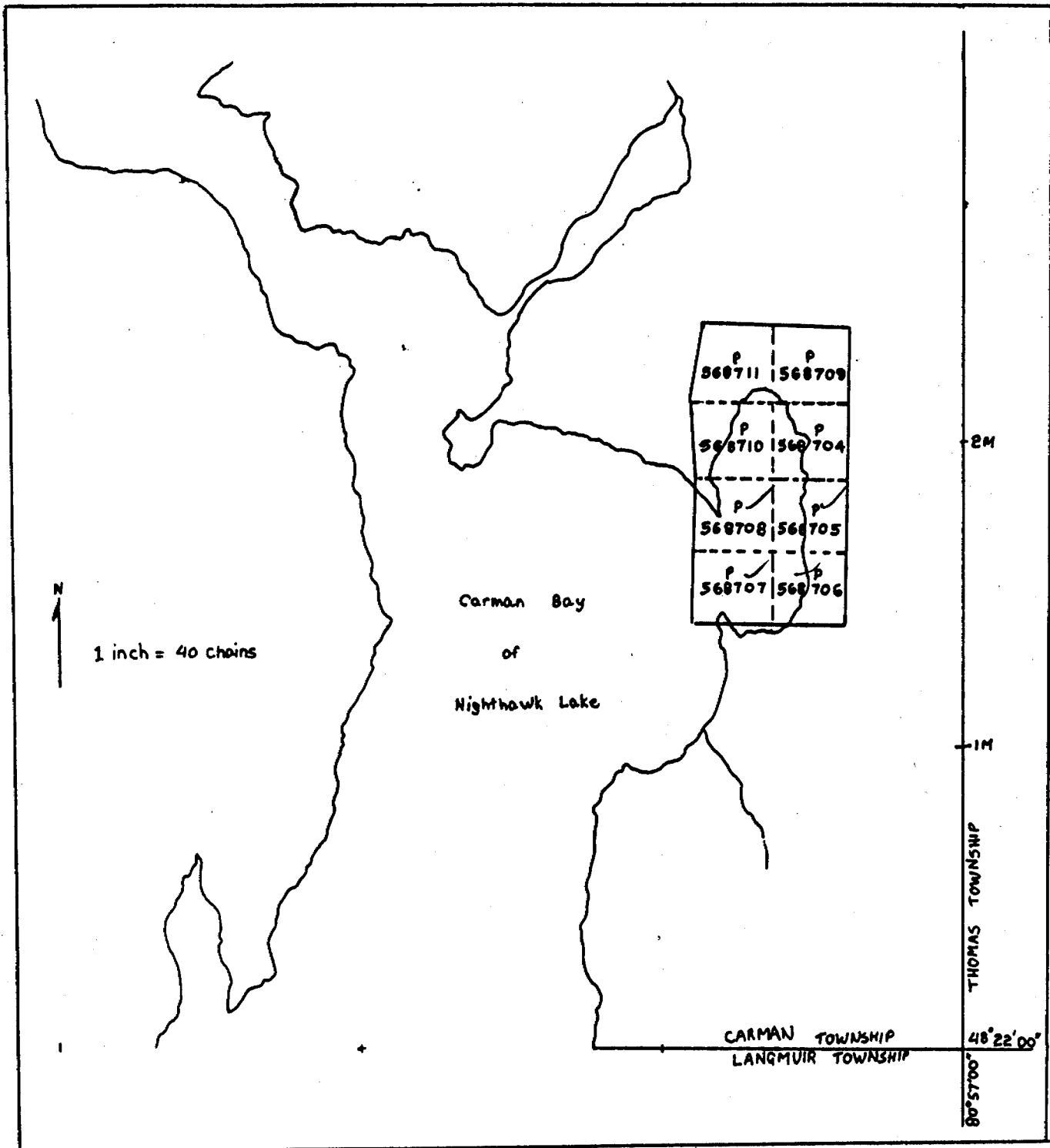
Timmins, Ontario

D.R. Pyke, Ph.D.

D.R. Pyke



LOCATION OF CARMAN BAY CLAIM GROUP, (NH-4)
 CARMAN TOWNSHIP, PORCUPINE MINING DIVISION



Introduction

During the period March 27 - 30, 1981, W.O. Karvinen and Associates Ltd., was contracted to carry out portable percussion overburden drilling on the Carman Bay Claim Group in the Night Hawk Lake area. During the contract period, excluding March 29, 1981, they drilled the 12 holes included in this report, for a total of 829 feet.

Equipment and Methodology

The equipment used consists of a portable gasoline Cobra plugger, 25 mm. thick rods, a mechanical two-lever jack for pulling rods and a flow-through type sampler with a serrated cutting edge. A double track Ski-Doo Alpine equipped with a sleigh is used as a carrier.

In a new area, normal procedure by the two man crew is to put down a few test holes to determine if suitable lodgement till is present and if the overburden can be penetrated. If these tests are positive, normal drilling along lines across ice direction is carried out.

The main objective is to hit bedrock and to sample both it and the glacial sediments immediately overlying bedrock. From past experience in the Timmins area, there is a widespread distribution of lodgement and modified tills overlying bedrock, although in places it is completely eroded and replaced by glaciofluvial (sand, silt) or glaciolacustrine (clays, silts) deposits. Very little is known about the detailed glacial history of northeastern Ontario and therefore other till sheets

higher in the section may exist or till deposits overlying bedrock may vary in age and origins from area to area. Because of these uncertainties, some of the interpretation of results may be difficult, but again from past experience, a relatively simple geochemical picture usually emerges, provided the tills are properly identified during sampling and separated from other glacial sediments.

Glacial Sediments, Night Hawk Lake Area

Although only a few profiled holes were done, it appears that the stratigraphic section in the Night Hawk Lake area consists of a basal unit of tills overlain by a relatively thick (10 to 100 feet) sequence of varved clays covered by a relatively thin veneer of till (ablation?). Locally the tills are absent and are replaced by sands or silts. These areas probably represent erosion channels.

Lodgement till in the area consists of very compact, light to dark gray rock debris which is "pasted" onto the bedrock surface. It comprises a wide spectrum of clast sizes, most of which are locally derived. Armoured clasts and mold and cast features are common. Lodgement till best reflects the chemical composition of bedrock in the immediate up-ice area.

Modified till is compositionally similar to lodgement till but is not compact. Mold and cast features are absent and armoured clasts are few. It appears to be till that has been slightly modified by frost action and/or fluidization. Although modified, it still reflects accurately the chemical make-up of its nearby bedrock source up-ice.

Sands, silts or clays, where sampled over bedrock do not represent

in any way the chemistry of the nearby bedrock. Their chemical composition has been greatly modified and some of the components have been derived from distant sources. Therefore, these sediments cannot be used effectively in evaluating the bedrock potential of a small area such as a normal group of claims.

Dale R. Lyke

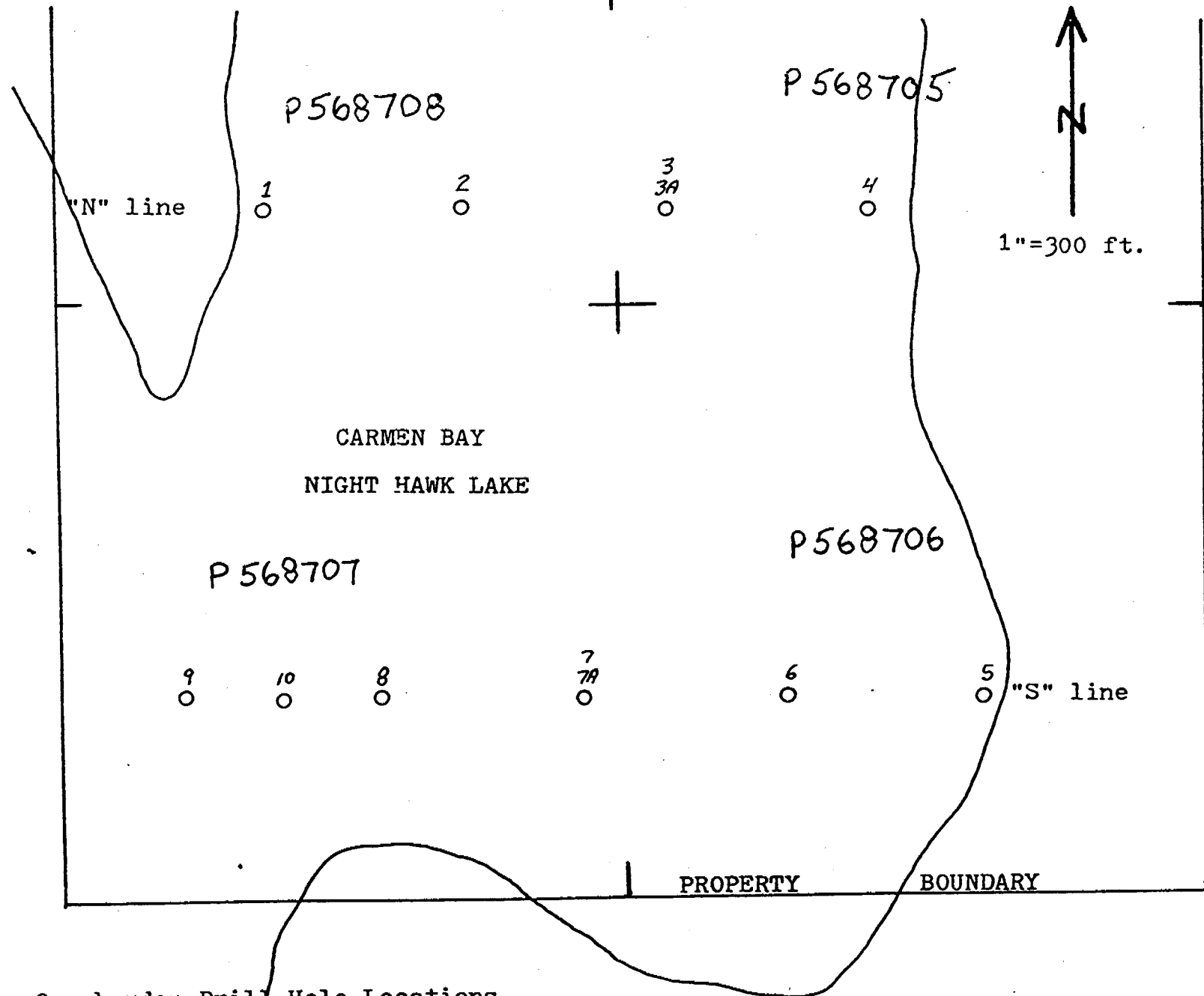


FIG. 1: Overburden Drill Hole Locations,
Carmen Bay (NH-4) Group, Carmen Township.

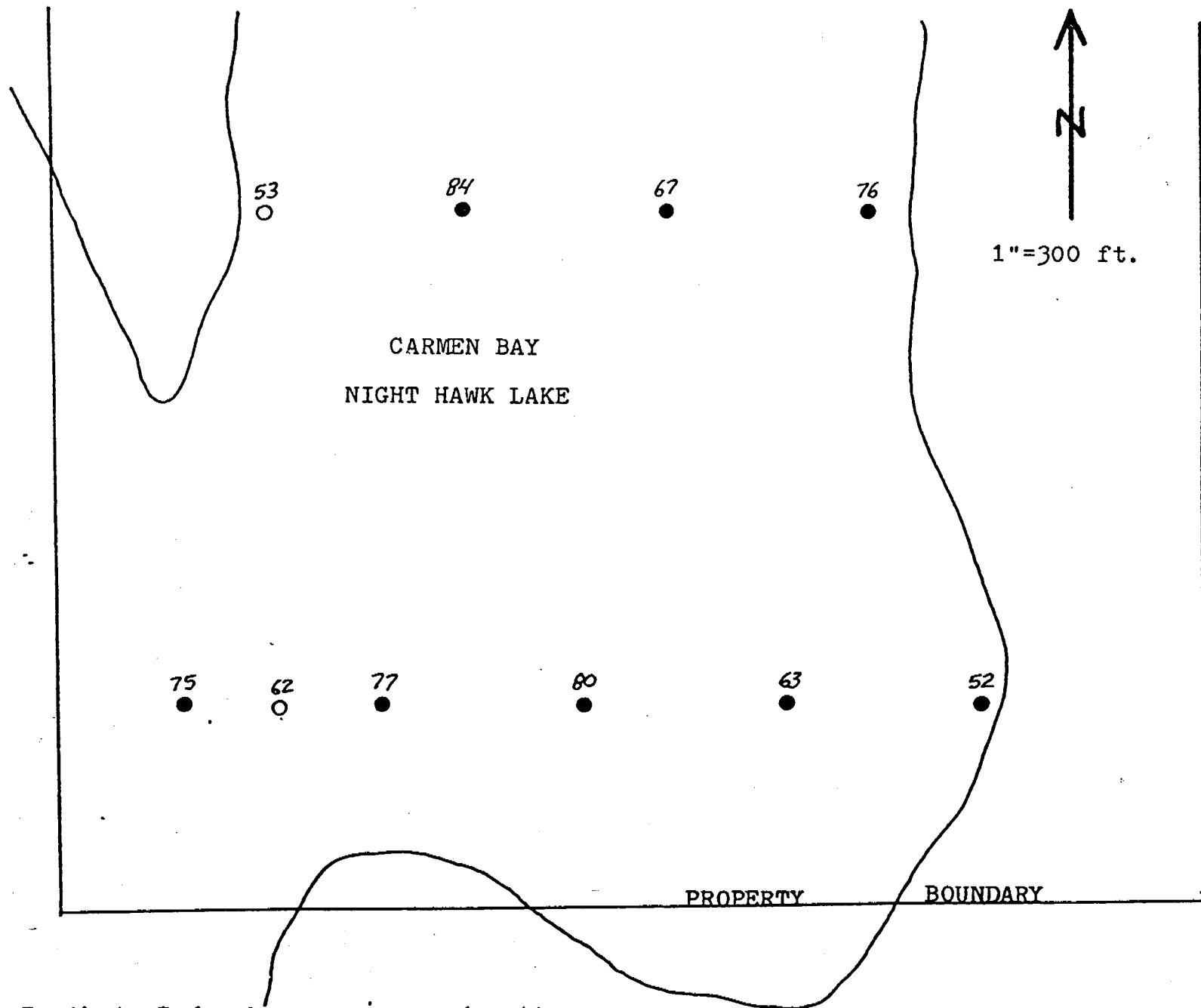


FIG. 2: Depth to Bedrock, Carmen Bay (NH-4) Group

- reached bedrock
- did not reach bedrock

Sample No.	Coordinates	Depth of hole (ft)	Bedrock reached	Bedrock description	Till Description				Notes
					Color	Type	Thickness	Quality	
NH4-1	N-line 000E	52.8	no	-	gray	silt		poor	
NH4-2	N-line 400E	84.4	yes	-	gray	silt		poor	
NH4-3	N-line 800E	66.3	yes	-	gray	modified		fair	
NH4-3A	N-line 800E	67.3	yes	mafic volc.		modified		good	silty
NH4-4	N-line 1200E	75.6	yes	mafic volc.	gray	clay		poor	little till
NH4-5	S-line 1600E	51.8	yes	-	brown	sand		poor	
NH4-6	S-line 1200E	63.0	yes	mafic volc.	gray	silt		poor	clayey
NH4-7	S-line 800E	79.5	yes	mafic volc.	gray	modified		good	
NH4-7A	S-line 800E	73.5	yes	mafic volc.	gray	modified		good	
NH4-8	S-line 400E	77.2	yes	-	gray	lodgement		good	
NH4-9	S-line 000E	74.9	yes	-	gray	lodgement		good	
NH4-10	S-line 200E	61.7	no	-	gray	silt		poor	

TABLE I - DRILLING STATISTICS

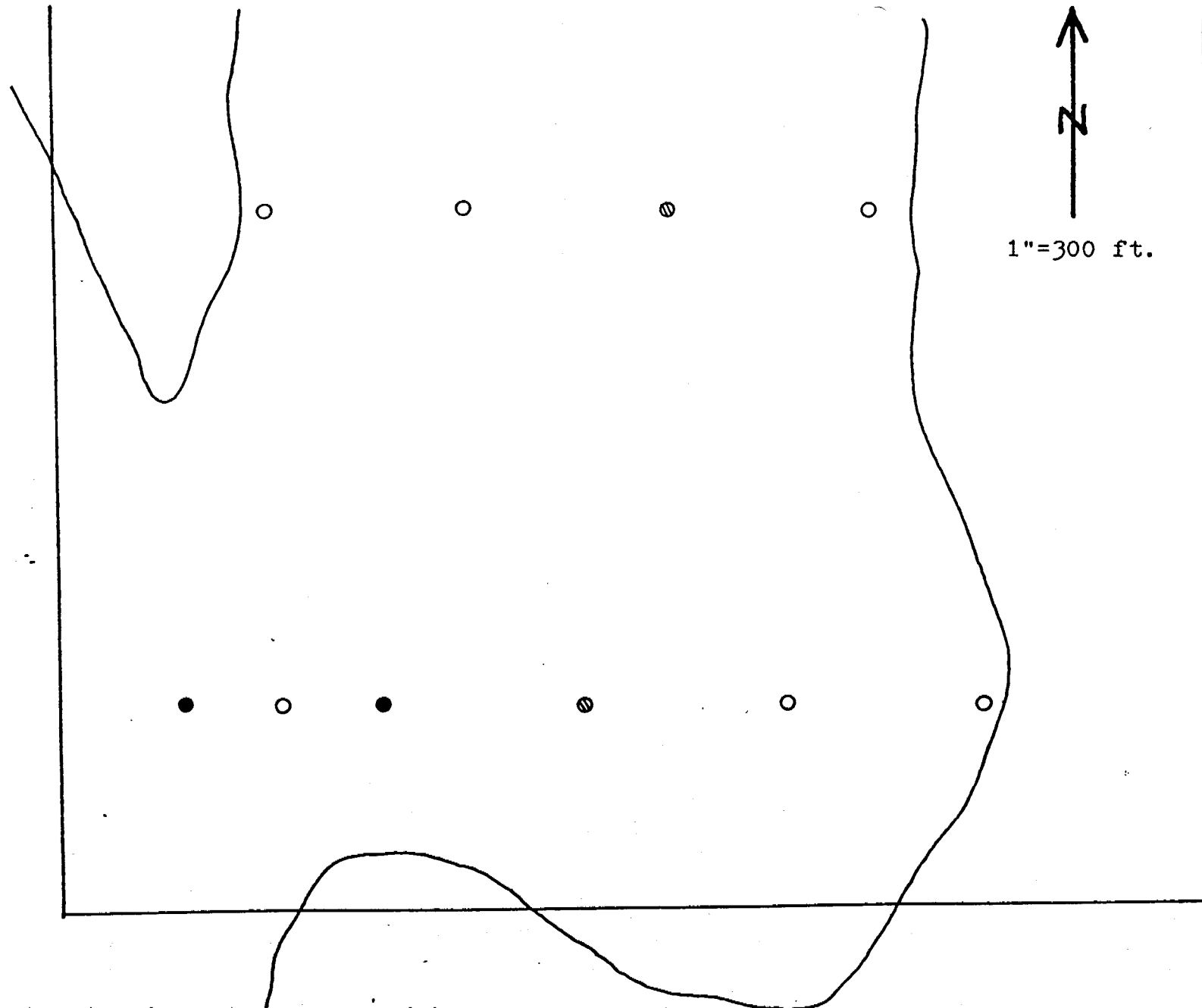


FIG. 3: Distribution of Lodgement (●) and Modified (⊙) Till and Sand/Silt/Clay (o), Carmen Bay (NH-4) Group.

W.O. KARVINEN & ASSOCIATES LTD.

OVERBURDEN DRILL LOG

Log No.: NH4-1
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 27, 1981

Log No.: NH4-2
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 27, 1981

Location: N-line 000E

Location: N-line 400E

Depth	Sample No.	REMARKS
16.1m	NH4-1	Gray silt.
	-----	Bedrock- not reached.

Depth	Sample No.	REMARKS
25.7m	NH4-2	Gray silt.
	-----	Bedrock - sample lost during retrieval.

SCALE 1:200

OVERBURDEN DRILL LOG

Log No: NH4-3
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 27, 1981

Log No: NH4-3a
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 27, 1981

Location: N-line 800E

Location: N-line 800E

Depth	Sample No.	REMARKS
20.2m	NH4-3	Modified till - gray
	J-----	Bedrock - sample lost during retrieval.

Depth	Sample No.	REMARKS
20.5m	NH4-3A	Modified till - silty
	NH4-3A*	Bedrock - mafic volcanic

SCALE 1:200

OVERBURDEN DRILL LOG

Log NO.: NH4-4
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 28, 1981

Log NO.: NH4-5
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 28, 1981

Location: N-line 1200E

Location: S-line 1600E

Depth	Sample No.	REMARKS
230m	NH4-4	Clay-gray. Little till
	NH4-4*	Bedrock - mafic volcanic.

Depth	Sample No.	REMARKS
15.8 m	NH4-5	Sand, brown
	-----	Bedrock - sample lost during retrieval.

SCALE 1:200

OVERBURDEN DRILL LOG

Log No.: NH4-6
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 28, 1981

Log No.: NH4-7
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 28, 1981

Location: S-line 1200E

Location: S-line 800E

Depth	Sample No.	REMARKS
19.2m	NH4-6	Silt - gray, clayey.
	NH4-6*	Bedrock- mafic volcanic.

Depth	Sample No.	REMARKS
24.2m	NH4-7	Modified till - gray.
	NH4-7*	Bedrock- mafic volcanic.

SCALE 1:200

OVERBURDEN DRILL LOG

Log NO.: NH4-7a
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 28, 1981

Log NO.: NH4-B
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 30, 1981

Location: S-line 800E

Location: S-line 400E

Depth	Sample No.	REMARKS
22.4m	NH4-7A	Modified till - gray
	NH4-7A*	Bedrock- Mafic volcanic.

Depth	Sample No.	REMARKS
23.5m	NH4-8	Lodgement till - gray.
	-----	Bedrock - sample lost during retrieval.

SCALE 1:200

OVERBURDEN DRILL LOG

Log NO.: NH4-9
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 30, 1981

Log No: NH4-10
 Project: CARMAN BAY (NH-4)
 Township: CARMAN TOWNSHIP
 Date: MARCH 30, 1981

Location: S-line 000E

Location: S-line 200E

Depth	Sample No.	REMARKS
22.8m	NH4-9	Lodgement till- gray
-----	-----	Bedrock - sample lost during retrieval.

Depth	Sample No.	REMARKS
18.8m	NH4-10	Silt- gray.
-----	-----	Bedrock - not reached

SCALE 1 : 200